

REMARKS

Claim 3 has been amended. No claims have been cancelled or added. Claims 10 – 17 and 32 – 39 are withdrawn. Hence, claims 1 – 9, 18 – 31 and 40 – 44 are pending in the Application.

SUMMARY OF REJECTIONS/OBJECTIONS

Claims 1 – 6, 18 – 28 and 40 – 44 are rejected under 35 USC 102(b) as being anticipated by "Bridge" (U.S. Patent No. 6,272,503).

Claims 7 – 9 and 29 – 31 are rejected under 35 USC 103(a) as being unpatentable over Bridge in view of Wang (U.S. Patent No. 5,758,345).

REJECTIONS BASED ON 102(b)

Claim 1

Claim 1, recites:

a database server causing a tablespace to be transported from a first file system to a second file system; and
after transporting said tablespace to said second file system, said database server importing said tablespace into a local database managed by said database server.

Claim 1 recites a database server that imports a tablespace into a local database managed by the database server. Importantly, the database server also causes the tablespace to be transported between a first and second file system. This particular way of automatically provisioning a database is not disclosed or in any way suggested by Bridge.

Applicant made the above argument in the previous Office Action. The Office Action, however, states that Applicant relied on a limitation not present in claim 1.

The limitation allegedly absent is in fact present and required by claim 1. Specifically, applicant argued that "Claim 1 recites a database server that imports a tablespace into a local database managed by the database server." The feature argued in

the statement is present in the limitation “said database server importing said tablespace into a local database managed by said database server.”

The Office Action maintains the allegation that Bridge, at passage at col. 9, lines 41 – 50, teaches the limitation of a database server causing a tablespace to be transported between file systems. In this passage, the Examiner must be correlating the target database to the claimed database server that imports the tablespace. Note the passage describes a source database system that produces a set of files in response to a user providing the name of the files.

Importantly, the user copies the files "to a place accessible to the target database [sic]." Presumably the user copies the files by manually invoking standard file transfer utilities, such as operating system commands or FTP. The passage however does not suggest in any way much less disclose that the target database server causes the files to be transported.

The Office Action argues that Bridge teaches transferring a tablespace from a source database to a target database, and alleges that this teaching is read on by a database server causing the tablespace to be transported between file systems.

The Office Action is correct in that Bridge does teach transferring a tablespace from a source database to a target database. However, a general teaching about performing an operation does not by itself disclose or suggest each and every specific way of performing that operation. Disclosure of a genus does not necessarily disclose or suggest every species of the genus. It does not necessarily follow from the fact that a tablespace is transported between file systems that the transporting of tablespaces is being caused by a database server as claimed.

The Office Action then recites the principle that the pending claims must be given the broadest reasonable interpretation consistent with specification. The principle is cited to justify a broad interpretation of the limitation “database server also causes the tablespace to be transported between a first and second file system.” Unfortunately, the Office Action never states what the interpretation is. Nevertheless, Applicant infers from the fact that the Office Action is relying upon the teaching in Bridge about transferring tablespaces between file systems to anticipate claim 1, that the Office Action is interpreting claim 1 as reciting and claiming all ways of transporting tablespaces between file systems.

Such an interpretation ignores express limitations in claim 1, namely that the transporting of a tablespace between file systems is caused by a database server. Because the broad interpretation ignores an express limitation in a claim, the interpretation being applied by the Office Action is not reasonable.

Finally, the Office Action cites the principle that the broadest interpretation must also be consistent with the interpretation that those skilled in the art would reach. Apparently, the Office Action is alleging that the broad interpretation applied is consistent with that those skilled in the art would reach. However, the Office Action is incorrect.

One skilled in the art would not interpret the limitation of a database server causing a tablespace to be transported between file systems to cover every way of transporting tablespaces or files. For example, one skilled in the art would not interpret a user invoking a file transfer utility to copy files between file systems as being covered by the notion of a database server transporting tablespaces between file systems.

Based on the foregoing, Bridge fails to teach at least some features of claim 1, and therefore fails to teach all the features of claim 1. Therefore, claim 1 is patentable.

Reconsideration and allowance of claim 1 is respectfully requested.

Dependent Claim 3

Claim 3 was amended to fix an obvious antecedent basis error. The amendment places the claim in a better form for consideration on appeal and does not present new issues requiring further consideration and search. The amendment should be entered.

Claim 3, as amended, recites “wherein said routine is written in code that conforms to a database language and that may be executed by a database server.” A routine written in code that conforms to a database language and that may be executed by a database server is not disclosed or suggested in any way by the cited art.

The Office Action alleges that this feature is taught by the Bridge teaching “executing by processor instructions.” It does not necessarily follow that instructions that are executable by a processor are instructions that conform to a database language, such as PL/SQL.

Independent Claim 18

Claim 18, recites a "method for automatically instantiating database data in a distributed database system", comprising
"a database server causing a set of one or more files to be transported from a first file system to a second file system;
wherein said set of one or more files store said database data; and
after transporting said set of one or more files to said second file system, said database server provisioning said database data as at least part of a database managed by said database server."

Claim 18 requires that to automatically instantiate a database, that a **database server** cause a file that stores data for a database to be transported between a first and second file system, and then provision the data as at least part of a database managed by a database server. For reasons similar to those discussed with respect to claim 18, the cited art fails to suggest in any way much less disclose this feature of claim 18.

Based on the forgoing, claim 18 is patentable. Reconsideration and allowance of claim 18 is respectfully requested.

Dependent Claim 20

Claim 20 recites wherein said “set of one or more files includes metadata describing database objects and **commands for inserting data into the database objects**, wherein the step of provisioning includes **importing** said database data into said **database by executing said commands.**” Note that claim 18, upon which claim 20 depends, recites that the set of one or more files are caused to transported between file systems by a database server. Files, that are transported between files systems by a database server, and that include commands executed to import database data, is a feature that is not disclosed or suggested in any way by the cited art.

The Office alleges that Bridge teaches this feature at col. 3, lines 25 – 34, reproduced below.

Accordingly, there is a need for a way to increase the address space of disk pointers in an upward compatible manner. There is also a need for a way to transfer disk pointers between databases without patching.

SUMMARY OF THE INVENTION

In accordance with an aspect of the invention, a method of retrieving a data item from a computer database includes partitioning the database into

a set of tablespaces and storing references to data items as tablespace-relative pointers, indicating a location relative to the tablespace containing the data item.

The passage above teaches about modifying disk pointers, transferring disk pointers, and partitioning data into tablespaces. It does not follow from these teachings that files are transported by a database server between files systems, and that the files include commands executed to import database data, as claimed.

Dependent Claim 21

Claim 21 recites “said set of one or more files includes backup files created by a recovery manager, wherein the step of provisioning includes causing said recovery manager to create said database managed by said database server from said backup files.” This limitation is not suggested much less disclosed by the cited art.

The Office Action alleges that Bridge teaches this feature at col. 6, line 64 to col. 7, line 5, reproduced below.

When a disk pointer is read from a datafile, the database system can obtain a TSN for the disk pointer from the operating context. Therefore, the TSN of a tablespace-space DBA need not be stored in a disk pointer embedded in a datafile, allowing the portion of a disk pointer allocated for the AFN to indicate the TRFN instead. Such a disk pointer is a "tablespace-relative disk pointers." Disk pointers not embedded within a datafile, such as those disk pointers found in recovery logs, are stored with the proper TSN.

The above passage teaches that disk pointers in recovery logs are stored with the proper TSN (tablespace number). This fails to teach creating a database from backup files. Those skilled in the art know that recovery logs are not backup files. Moreover, the

passage does not in any way suggest much less disclose creating a database from recovery logs or backup files.

Based on the foregoing, claim 21 is not anticipated by Bridge and is therefore patentable. Reconsideration and allowance of claim 21 is respectfully requested.

Dependent Claim 22

Claim 22 recites “wherein an archive log stores data recording changes to said database made after creating the backup files, wherein the step of provisioning further includes changing said database to reflect changes recorded in said archive log.” This feature is not suggested in any way much less disclosed by the cited art.

The teaching relied upon for rejecting claim 22 is the same as for claim 21, as described above. That passage does not even describe making changes to a database to reflect changes recorded in an archive log, much less where such a step is performed as part of provisioning database data included in one or more transported files, as claimed. (See claim 18, which claim 22 depends on).

Based on the foregoing, claim 22 is not anticipated by Bridge and is therefore patentable. Reconsideration and allowance of claim 1 is respectfully requested.

REJECTIONS BASED ON 35 USC 103

Claim 7

Claim 7 recites that the "database server provisions a synchronization mechanism that applies changes made to the tablespace to the copy." The Office Action does not allege that Bridge teaches this feature, but does allege that Wang teaches this feature at the passage at col. 14, line 59 to col. 15, line 10.

As mentioned before, terms in computer technology have multiple meanings or senses, like many words of the English language. Synchronization mechanism is one such term. The sense of Wang is different than that required by claim 7.

In Wang, the term's sense is a synchronization mechanism that controls concurrent access to resources such as data. The synchronization mechanism described in the passage is a distributed lock manager that issues locks to synchronize access.

In claim 7, the term's sense is a synchronization mechanism that keeps bodies of data in sync. For example, "synchronization mechanisms can also be automatically provisioned to keep the tablespace and a copy in sync." (Application 0025) A defining feature of such a mechanism is that it "applies changes made to the tablespace to the copy", as claimed. Wang does not teach this kind of synchronization mechanism.

The Office Action alleges that the synchronization mechanism is not defined in a way that removes the reference from reading upon claims. However, this is incorrect. The synchronization mechanism, as expressly defined by the claim, does not read on Wang.

First, the synchronization mechanism as claimed applies changes made to the tablespace to the copy of the tablespace. The synchronization mechanism of Wang only controls access to data, but does not make changes to data.

Second, the synchronization mechanism as claimed is provisioned by a database server. Wang does not teach that the synchronization mechanism it teaches about is provisioned by a database server.

Based on the foregoing, Wang and Bridge, alone or in combination, fail to teach features of claim 7, and therefore fail to teach all the features of claim 7. Therefore, claim 7 is patentable. Reconsideration and allowance of claim 7 is respectfully requested.

Remaining Pending Claims

The pending claims not discussed so far are dependant claims that depend on an independent claim that is discussed above. Because each of the dependant claims include the limitations of claims upon which they depend, the dependant claims are patentable for at least those reasons the claims upon which the dependant claims depend are patentable. Removal of the rejections with respect to the dependant claims and allowance of the dependant claims is respectfully requested. In addition, the dependent claims introduce additional limitations that independently render them patentable. Due to the fundamental difference already identified, a separate discussion of those limitations is not included at this time.

For the reasons set forth above, Applicant respectfully submits that all pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all claims is hereby respectfully solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Respectfully submitted,

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